Will Congress Back the Transatlantic Flight?—Maybe!

Aviators Hoping the New Session Will Find a Way Out of the Present Chaos of Conditions and Lack of Spirit

By Theodore M. Knappen

WASHINGTON, February 22.

THE future of aviation so far as the United States government is concerned is nothing less than chaotic. There is no general programme evolved or even distantly in sight, either on the part of the Executive or of Congress. In the absence of any constructive or even directive programme the military aviation forces built up by the army and navy during the war are dissolving, officers are returning to private life and the great industrial plants that sprang up during the war and attained a world-surpassing output are not only idle but are being dismantled. So confused is the situation and so many the distracting elements that the pessimistic think it is hopeless and predict that within another year the United States will be almost as far behind in the development of aviation as it was at the beginning of the war.

It is pointed out that after watching the war in Europe for three years, with its tremendous development and multiple uses of aircraft, we were practically as unprepared in respect to military aviation when the war began as we were three years before. The same laissez faire tendency is now expected to result in a failure to meet the post-bellum situation, with the result that, while European governments, both directly and indirectly, through their encouragement of private industry and research, are vigorously continuing the development and exploitation of aircraft and all forms of aerial transport, we will do little or nothing and that what we shall do will be done in such a divided and desultory way that the results will be inadequate.

After making full allowance for our lack of preparedness and the consequent immensity of the task the country undertook with respect to aviation after the war began, it is now generally admitted by those who have reviewed the course of our military aeronautics during the war that the chief cause of failure to accomplish more than we did was the lack of a central control of all government activities in this direction. Toward the end of the war the aviation affairs of the army were concentrated under the headship of John D. Ryan, as an

Assistant Secretary of War, but the navy went its own triple-bureau aviation way until the last, and is still pursuing it. Besides the army and navy bureaus we had the Aircraft Board, which gradually sank into innocuous desuetude; the Advisory Committee on Aeronautics and the joint Army and Navy Technical Board, each with a finger in the aviation muddle. Inside the army, with its distribution of authority, there was always the General Staff to reckon with. While Mr. Ryan was in the saddle the General Staff went into discreet retirement, but as soon as he resigned it reasserted its authority and is now in supreme control of all army aeronautical matters, through a department of military aeronautics, with General Menoher at the head of it and with General Kenly under him as head of the flying force.

The General Staff is very jealous of its authority, is opposed to a separate department of the air and even to a degree of independence within the War Department. Moreover, it views aeronautics as merely a sort of minor appendix and relegates it to an inferior place as compared with other arms of the military service. The General Staff's plan for numbers and size of the establishment is probably as large as could be expected in time of peace and is likely to be larger than Congress will ultimately allow, but the status assigned to military aeronautics is inferior to that of cavalry, artillery and infantry, and the plan of administration still further emphasizes the subordinate position assigned to it. Instead of being a separate corps, its higher officers are to be drawn from other branches of the army, and there is little chance of promotion for the real military aviators, with the probable result that not many of the best fliers will remain in the service. The personnel under the General Staff proposal would number about 12,000 officers and men.

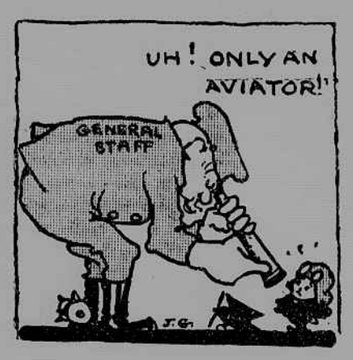
Congress Would Like to Go On

There is a pronounced sentiment in Congress in favor of continued activity in the development of aviation and aeronautics and a rather general belief that there must be some degree of separation of the control of this development from the authority of the General Staff. But the War Department supports the General Staff, the President is opposed to the creation of an independent department of the air, and the Navy Department is jealous of the independence of its own aviation work. There is, therefore, little hope of any really constructive legislation from the present Congress, but with legislation controlled by the opposition party after March 4 there is a chance for legislation on the merits of the subject, rather than in harmony with administration policy.

The Senate Military Affairs Committee long ago declared unanimously in favor of an independent department of the air, but now that the war is over it has to some extent lost interest in the subject and Senator Chamberlain, its chairman, is not sure that an absolutely independent department is necessary, though he feels that as things are there is small chance for adequate development, and that some original legislation on the subject of the place, importance and scope of its operations within the army will be necessary if aviation is not to be scandalously neglected.

Senator New, of Indiana, has a bill for the creation of a separate department of the air, which would be of Cabinet rank and would include under its authority all the aviation and aeronautical activities now controlled separately by the army, navy and marine corps. Despairing of getting any action on this proposal at present he plans to attach to the military appropriations bill a rider that will provide for the continuation of experimental and developmental work relating to aircraft and their uses, and will press vigorously for its adoption when the military appropriations bill comes up next week.

The above mentioned appropriations bill,



for the fiscal year ending June 30, 1920, carries a total of $20,000,000 for army aeronautics in all forms in addition to the pay of the personnel, but leaves the organization and direction of aviation matters entirely to the discretion of the War Department. This, however, is only a makeshift bill for the readjustment period and does not undertake to establish the outlines of the permanent military establishment. Half of the $20,000,000 is for military service and half for the Bureau of Aircraft Production. These sums are exclusive of the pay personnel, which is approximately 12,000 and is supposed to represent about 12,000 flying units.

Mr. Kahn Goes To Europe

When legislation covering the permanent aerial military establishment comes up in the next Congress it will have a strong friend in Representative Julius Kahn, of California, who will then be chairman of the House Military Affairs Committee, being now the ranking Republican member. Mr. Kahn was strongly in favor of an independent air service during the war, but, like Senator Chamberlain, he is not sure that it is desirable in time of peace, though he does hold that there should be some sort of centralized control of all forms of government aeronautics, civil or military. However, Mr. Kahn says that he is of an open mind on this subject, and when he goes to Europe, right after March 4, to make studies and observations that will give him additional preparation for his position as chairman of the Military Affairs Committee, he proposes to give special attention to the British system of an independent air administration. Mr. Kahn holds that it is hardly possible to overestimate the importance of aeronautics in war and in preparation for war, and a part of his universal military training programme looks to the training in aviation of a fair proportion of the boys that would be called to the colors for six months' service on attaining the age of eighteen.

Senator Wadsworth, of New York, who is a member of the Senate Military Affairs Committee, is deeply interested in aviation, favored an independent air department during the war and attaches great importance to the maintaining of a strong and efficient air service in peace and the building up of the private aircraft industry. In this connection it is interesting to note that whereas the army appropriation bill is so broad that the army may manufacture its own 'planes and other machines and apparatus if it so desires, the navy appropriation bill forbids any part of the funds set aside for naval aviation to be used for the construction of a factory for the manufacture of aeroplanes.

The naval appropriation for next year is $15,000,000 for "procuring, producing, constructing, operating, preserving, storing and handling aircraft, establishment and maintenance of aircraft stations and for experimental work in development of aviation for naval purposes." The personnel will be about the same in number as in the army.

The army and navy between them will have $35,000,000 to spend in the fiscal year 1919-'20 on aviation maintenance and development in addition to their respective payrolls if the pending bills pass in their present form.

Friends of a symmetrical aviation organization do not find fault with the size of the appropriations, but they predict that, owing to the division of authority, the scattering of the funds and the neglect of all civil aspects of aircraft and aviation, the results, both from the standpoint of military value and industrial development, will be out of proportion to the amounts to be expended. There is absolutely no provision anywhere for any survey of the relation of military aeronautics to civil transport, and the beneficial interrelations that may be established between the two, at least during the gap between the feverish war-time activity in the manufacture and use of flying machines and the reëstablishment of the aircraft industry on a normal basis. In England this was done scientifically even during the war, and arrangements were made to create enough government patronage in peace to insure the continuation of some of the great private plants. Nothing of the kind has been done in this country and the vast plants that were erected during the war are being dismantled, though here and there manufacturers are holding together skeleton organizations of engineers and skilled mechanics in the hope that after the passage of the appropriation bills there will be enough government business to keep them going in a small way during the transitional period.

Besides the army and navy we now have the postoffice in the aerial field, thus establishing one more means of dissipating efforts and funds. The postoffice will have about a million dollars for its aviation programme in the next fiscal year.

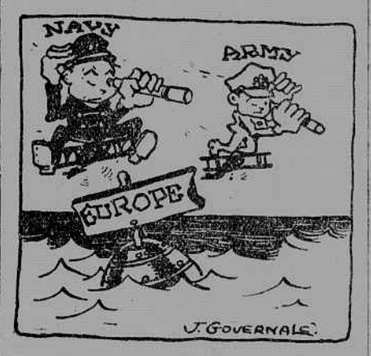
What About Our War Machines?

Nothing is being done to utilize either the material and machines accumulated during the war in excess of peace requirements or the experienced aviators who will not be retained in the small peace establishments. Little or no attention has been paid to the suggestion of Alan R. Hawley, president of the Aero Club of America, for the creation of a United States aerial transport corporation, to take over and make commercial use of the $800,000,000 worth of equipment that the army and navy cannot use, and utilize them in the establishment and operation of commercial aerial transport lines.

Altogether there are about 37,000 aviation motors and 15,000 'planes of various kinds, most of which will not long be suitable for military use, besides vast quantities of machinery and raw materials, that are now in storage without a single general plan for their salvage or utilization in any way. No body or organization is charged with general and central responsibility, and there is no more forethought for peace than there was for war. In the stress of the closing days of a disgruntled and weary Congress there is no time or energy available for formulation of programmes that should have been worked out by some central organization that does not exist and never will exist if the various jealous centres of divided control are not eliminated.

The Transatlantic Flight

The subject of the proposed transatlantic flight is viewed with mild interest in Congress, though all the friends of aviation in that branch of the government would like to see an American 'plane or airship to be the first to cross the ocean. Both the army and navy have been working separately on plans for a transatlantic flight for next summer, and there appears to be some jealous rivalry between them in this connection. The army aviation authorities are



carefully guarding their plans from publicity. They say that they are proceeding so carefully and conservatively with the preliminaries that when an army 'plane does start to jump the Atlantic nothing but the most adverse circumstances will keep it from being successful. They are convinced that an aeroplane of the land type rather than the heavier seaplane type is the machine that will turn the trick and win the honor and glory for America of making the first flight across the waters. Not until it has flown a 'plane over land for at least 1,200 miles in a single flight will the army essay the transatlantic trip.

The navy was covering up its plans for the transatlantic flight, too, but they were accidentally revealed in some degree last week. It confidently expects to send one of its gigantic seaplanes across the Atlantic next summer, and, like the army, is making such a careful study of the problem and devoting such painstaking attention to the preparation that when the effort is made it will be no wild dash with the result largely dependent on luck, which is the Washington estimate of Captain Sundstedt's promised flight from New York on his own account.

British in The Race

The British air service is to make an effort, too, and at least two British aircraft manufacturing corporations are planning transatlantic flights on their own account. "The London Daily Mail" has hung up a prize of $50,000 for the first flight across the big pond in seventy-two consecutive hours; the Aero Club of America has offered a reward of $10,000, and there are other more or less nebulous prizes that may bring the total of the fortune that awaits those participating in the successful feat up to $100,000.

Heavier-than-air flying machines are counted on to cross the Atlantic before the great leap is accomplished by a dirigible, but it is whispered that a "black horse" is looming up in the form of a cross between an airplane and a dirigible balloon that may take the money and the laurels. This machine is an American invention, which would probably have been taken up by the army or navy had the war continued. The rigid balloon envelope of this machine is double-walled and shaped like a horseshoe in the transverse section. The six propellers are placed in the inclosed space, through which the air is driven as the machine advances. The first model will be 420 feet long, 80 deep and 100 feet wide as to the balloon-plane part, with cabins 250 feet long and a weight carrying capacity of 26 tons. The machine will rise vertically by means of helicopters and will be sustained partly by its buoyancy and partly by the resistance of the air.

Across the Briny Deep

All the transatlantic flights so far planned, with the exception of Captain Sundstedt's, contemplate making the trip in two legs, from west to east, with the prevailing winds, the first leg being from Newfoundland to the island of San Miguel, in the Azores, and thence to Portugal, the former distance being 1,100 nautical miles and the latter 675. Captain Sundstedt expects to fly from New York to Newfoundland and thence directly across to Ireland, the water gap between the two big islands being about 1,800 miles.

It is pointed out, however, that notwithstanding the distance flight claims attributed to Captain Sundstedt, there is no authentic record of any airplane having flown continuously the equivalent of the distance from Newfoundland to the Azores, so that if he flies from Newfoundland to Ireland he will accomplish a feat that as yet has no parallel in experience.

Military and naval aviation experts in Washington do not deny that Captain Sundstedt may have solved some problems that are still baffling them and may luckily achieve the distinction of being the first to travel by the air route from America to Europe, but for their own adventures on this unknown route they prefer to prepare so carefully and study the problem so thoroughly that the issue will depend on chance in a very minor degree.

American Record So Far

The American record for sustained flight, measured in time, was made by Lieutenant Taliaferro, in September, 1915, with 9 hours and 48 minutes in the air. The best corresponding American naval aviation record was made January 23 last, by Ensign F. Dalrymple at Miami, Fla., the time being 9 hours and 21 minutes. The latter's machine was propelled by a Liberty motor, but even if he had maintained the maximum speed of 135 miles an hour for the whole time he would barely have equalled the distance from Newfoundland to Ireland. In such a flight an average speed of 90 miles an hour would be about the top limit, so that to cover in a single flight 1,250 land miles, between Newfoundland and San Miguel, the successful flying ship will have to stay in the air about fourteen hours.

While a translantic flight, as a mere isolated aeronautical stunt, might not have much value in itself and might be a far advanced pioneer of any worthwhile commercial use of such a route, it is viewed as a worthy enterprise, because of the stimulating effect that it would have on the realization of plans in the near future for long distance aerial transport overland and as a means of convincing the world that aerial transport has arrived, just as Bleriot's flight across the British Channel convinced a doubting world that heavier-than-air machines could really travel for considerable distances.

What Did We Get for That Little Aero Billion?

By J. Olin Howe

THE man in the street has for months wanted to know what he got for more than a billion dollars which the United States spent on aircraft after we entered the war. He paid the bill by buying Liberty bonds and war savings stamps, but they haven't itemized it for him. To be sure, there was the Congressional investigation and the Hughes committee also investigated, but previous to November 11 the censorship was always working and—— Well, anyway, what did they do with the money?

Listen to John D. Ryan, big business man, brought in last year to take charge of the aircraft programme: "Aircraft production in this country had to start at the beginning and find its way from nothing. Our manufacturers built an organization for the manufacture of aircraft which certainly has never been equalled in the world, and especially in the time in which it was done. From the time we began building we built more engines and more 'planes, month for month, than any nation in the war built from the time it began, and we had more ready, month for month, than any other nation. On the day the armistice was signed we had 686 'planes at the port of embarkation, which could not be loaded for lack of ship space."

You see, we invented and originated the airplane in this country and then became so busy quarrelling about who should have the credit for it that we left it for other nations to develop and find uses for. When the United States got into the war our aviation force consisted of 65 officers and 1,120 men, and we had a grand total of 118 'planes received during the nine years previous and considerably over half of them received in 1916.

A year and a half ago people were talking about flocks of airplanes to darken the German sky, much as they would of flocks of swallows, but the programme of the joint army and navy board called for 9,000 training 'planes and something over 20,000 combat 'planes. We produced the former and were well into the latter on November 11.

Listen to Lieutenant H. H. Emmons, who left an extensive law practice in Detroit for a naval commission, and was in charge of all aircraft engine production for the joint board: "Of the immense amount of material never before used for war which we produced, more aircraft and more engines got to the front in time for the final fight than of any other kind. We made the 9,000 training 'planes, too, and 16,000 engines to go into them, and all were delivered into service before the armistice was signed.

"On the combat engine side we were obliged to develop the Liberty engine. On May 16, 1917, the first stroke of a pen for its design was made and in six weeks' time, on July 4, the first engine was delivered in Washington ready to run. Then it was extended to a twelve-cylinder engine and the first of those passed the fifty-hour test and was ready for quantity production on August 25. Several hundred were produced at 330 horsepower, then we increased to 375 horsepower, produced 400 or 500 more and finally increased to over 400 horsepower. Many changes were required for this most powerful engine, but on May 29, 1918, a year from beginning work on it, we had delivered into service more than 1,100 Liberty engines. When the armistice came we were delivering 150 complete engines, ready to run, every working day."

Where the U. S. Stood in Quantity

Of the elementary training 'planes we had 3,746 of the Curtiss JN 4-D in service in this country on November 11, and 1,600 Standard J-1 'planes, and we had 2,474 advanced training 'planes in the United States. We had also 1,342 De Haviland 4s, the most used type of combat 'plane, on this side when Germany collapsed, and one Handley-Page, the big bombing 'plane. Meantime, we had shipped across to the boys in France 1,885 De Haviland 4s and 204 De Haviland 9s, 100 Handley-Page 'planes and two Lusac IIs.

At the same time that we were hustling to get out airplanes the Allies—England, France and Italy—were also building them for us. The following table shows how they helped:

AIRPLANES PRODUCED BY ALLIED NATIONS FOR UNITED STATES

1917	Training 'Planes	Battle 'Planes
December	394	5
1918		
January	196	4
February	233	90
March	130	98
April	122	99
May	11	299
June	118	315
Total	1,204	910

Our records are complete only to July 1 of last year, but after that we were less and less dependent on the Allies for airplanes.

Balloons for the use of the United States army observers were made on the other side and the records as to those are not complete. Oh, yes, some of Mr. Private Citizen's money went into balloons. They are as essential as airplanes. On this side of the water when Germany quit we had 123 balloons and 50 winches.

When the United States declared war on Germany there were about 5,500 men and women employed in the airplane industry in different parts of the United States. In June, 1917, this number had increased only to 7,298, and a year later 64,297 persons were employed by thirteen concerns making 'planes for the government and twelve making engines. On November 11 the total of employes had become 175,000. The Allies were asking us to make engines for them during all of 1918, and took all they could get and asked for more. One thing they depended on us for was castor oil, which is used extensively in airplanes. There were 108,000 acres planted to the castor bean in this country last summer.

Millions and millions of Milord Taxpayer's dollars went into flying fields and aeronautical stations. Up to the spring of 1917 we had only two of any account—at Mineola, L. I., and San Diego, Cal.—and those in use only to a limited extent. Our first flying field at College Park, Md., established in 1911, had long since become out of date. Within six weeks of the outbreak of war three more fields had been selected, cleared, equipped and made ready for flying. By the end of a year we had twenty fields in use, and when the fighting ended we had thirty-six flying fields in this country, situated all the way across the country between Mineola and San Diego, and one in the Panama Canal Zone. In addition we had fourteen supply depots across the country, three repair depots, two acceptance parks, one experimental field, one radio laboratory and one quarantine camp, all belonging to the air service.

The Flying Fields

The majority of the flying fields are in the South, where the climate is such that it is easier to fly all through the year. That is to say, the army fields are; the navy's flying boats need no fields, and important stations like Cape May, N. J., and Pensacola, Fla., are the headquarters of the navy fliers. They do work of moment, but compared with the army's aviation section are not numerous.

At Mineola the first reserve wing has three fields, Hazlehurst, Mitchel and Roosevelt, and three others near by, Brindley, at Commack; Henry J. Damn, at Babylon, and Lufbery, at Wantagh, all under the command of Lieutenant Colonel Millard F. Harman, jr., who commands this wing. The only other flying fields in the East are Baker field, at Rochester, N. Y., Bolling field, at Anacbstia, opposite Washington, D. C., and Langley Field, at Hampton, Va., which is the observers' school.

Texas has more than any other state, with twelve, including Camp Dick, the cadet gunnery camp at Dallas. There are three at San Antonio. French field is at Cocoa Walk, Canal Zone.

Before the war a flying field was a very informal affair, any large plot that would do to land on and a big shed for a hangar. Now a government flying field consists of 640 acres of clear grassland, has twelve hangars of standard substantial construction and requires a thousand men to run it.

The air service maintains general supply depots at Buffalo and at Garden City, L. I., and at Americus, Ga.; Fairfield, Ohio; Houston and San Antonio, Tex.; Middletown, Penn.; Richmond and Morrison, Va.; Little Rock, Ark.; Los Angeles, Cal., and two at Washington, D. C. The repair depots are at Indianapolis, Dallas, Tex., and Montgomery, Ala. The only testing field is at Wilbur Wright field, Dayton, Ohio, and acceptance parks are at Dayton and in Detroit. New York, Newport News; Philadelphia and Baltimore are the ports of embarkation for the air service.

Training goes on at all the flying fields and the service also has maintained ground schools at the University of California, Cornell, Princeton, University of Illinois and University of Texas; radio officers' schools at Columbia and at Penn field, Austin, Tex.; mechanics' school at Carnegie institute, at Pittsburgh; photographic schools at Rochester, Ithaca, N. Y., and at Fort Ethan Allen, near Plattsburg, and air service mechanics at Kelly field, San Antonio, and St. Paul. We have eight balloon schools in this country, too, the largest being at Fort Omaha, Neb.

We begin to see those millions being placed in circulation, but there is a lot more to this end of the subject: we have said nothing about France, where the United States has flying fields, repair depots and all sorts of schools. No one on this side can as yet go into details about that.

The little flying force we had in April, 1917, was lost in the growth of our air forces long before November, 1918. On the eleventh of that month the roster of the service showed 10,310 flying officers and 133,644 men. Of the officers 4,776 were overseas and 70,128 men were with them, leaving 5,534 officers and 65,516 enlisted men in this country.

Organization In the Air

In addition, there were 3,495 non-flying officers overseas and 3,754 at home, 7,249 in all. There were 233 balloonists in France and 297 in the United States. Out of 5,466 flying cadets only 341 were overseas and the balloon cadets, 329 in number, were all on this side.

The organization of our air forces is based on 150 men to a squadron, and 25 'planes and four squadrons make up a unit field. On November 11 there were 401 total units in the air service and 148 school detachments. Of the 401 units 181 were in France, 115 in the United States and 105 in England, where our aviation forces got considerable of their training. There were 39 construction companies of bricklayers and laborers, 20 at home and 19 in England; four air service mechanics regiments, all in France; 89 balloon companies, 51 here and 38 in France, and 61 photographic sections, 22 in France, 30 at home and 9 in England.

The first large unit to sail consisted of 200 men to construct an aviation school in France, which left New York July 3, 1917, under command of First Lieutenant L. S. Churchill. The first detachment of cadets left not long after—10 officers and 60 men, commanded by Captain James E. Miller. More than 70 squadrons, many from England and some from France, have been sent home since the armistice, to say nothing of construction companies, photographic sections and acceptance parks.

Up to November 8 the total casualties in the United States air service amounted to 838 in France and 1,324 in this country, the main causes being tailspins and collisions. Training casualties in the United States average 1,675 hours of flying per casualty and 3,474 hours of flying per fatality.

But for the armistice a number of new types of airplanes developed in this country would have come into use. Among the most interesting of these is the fastest 'plane in the world, a Curtiss triplane, which has maintained a speed of 160 miles an hour on official navy test and climbs 13,000 feet in 10 minutes with the full military load of 1,100 pounds. This is fifteen miles an hour faster than any other craft has ever flown. It has a twelve cylinder 400 horsepower engine and was built for the navy. This 'plane is entirely of American design and essentially different from other American or any European design. It has a new type of engine which weighs 25 per cent less than the lightest in any military 'plane. The 'plane lands at 60 miles an hour. It was first flown by Roland Rohlfs, son of Anna Katharine Green.

Three Quatrains by Donald Evans

Pyrgopolinices: Of Lothar Discreet

HE HELD his stick as though it were a sword;
He held his head as though he were the Word;
He held his mouth as though he had been heard;
He held his eyes as though naught had occurred.

Shepherdess in Gramercy Park

Her breath suspired in a little sigh—
Of plausive aspect, with upturned eye
She begged a boon from Him on high:
A softer breeze for her butterfly!

Spring Ecstasy

She kissed the young wind with her honey mouth,
Her voice brushed Time's wings in a cadent rune;
Her feet, more white for twilight, sought the South,
To bathe in April water of the moon!